

MUTCD 2003

CALIFORNIA SUPPLEMENT

May 20, 2004

PART 3

MARKINGS



STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

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CHAPTER 3A. GENERAL

Section 3A.02 Standardization of Application

The following is added to this section:

Standard:

All longitudinal pavement markings shall be retroreflective except non-reflective pavement markers and directional markings for tourists. Refer to CVC 21374.

Guidance:

If used, the masking tape should match the pavement surface color and not provide undue contrast.

Support:

Use of black tape for temporary “masking” is effective for new Asphalt Concrete pavement. However, for faded Asphalt Concrete pavement or Portland Cement Concrete pavements, black “masking” pavement markings could appear as a stripe in low light conditions and result in confusion to road users.

Section 3A.04 Colors

Standard:

Paragraph 1 (“Markings shall be...”), the first sentence is deleted and replaced with the following:

Markings shall be yellow, white, red, blue, or green

The following is added to this section:

Standard:

The color of curb markings shall conform to CVC 21458. Refer to CVC 21374 for exceptions.

A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) wide yellow lines on State highways.

Option:

A 75 mm (3 in) black line may be placed between the 100 mm (4 in) wide yellow lines on streets and highways under local jurisdiction.

Support:

Red pavement markers are used to alert possible wrong way drivers on freeways as shown in Figure 3A-101, Detail 14.

Section 3A.05 Widths and Patterns of Longitudinal Pavement Markings

Standard:

The widths and patterns of longitudinal lines shall conform to the details shown in Figures 3A-101 through 3A-112.

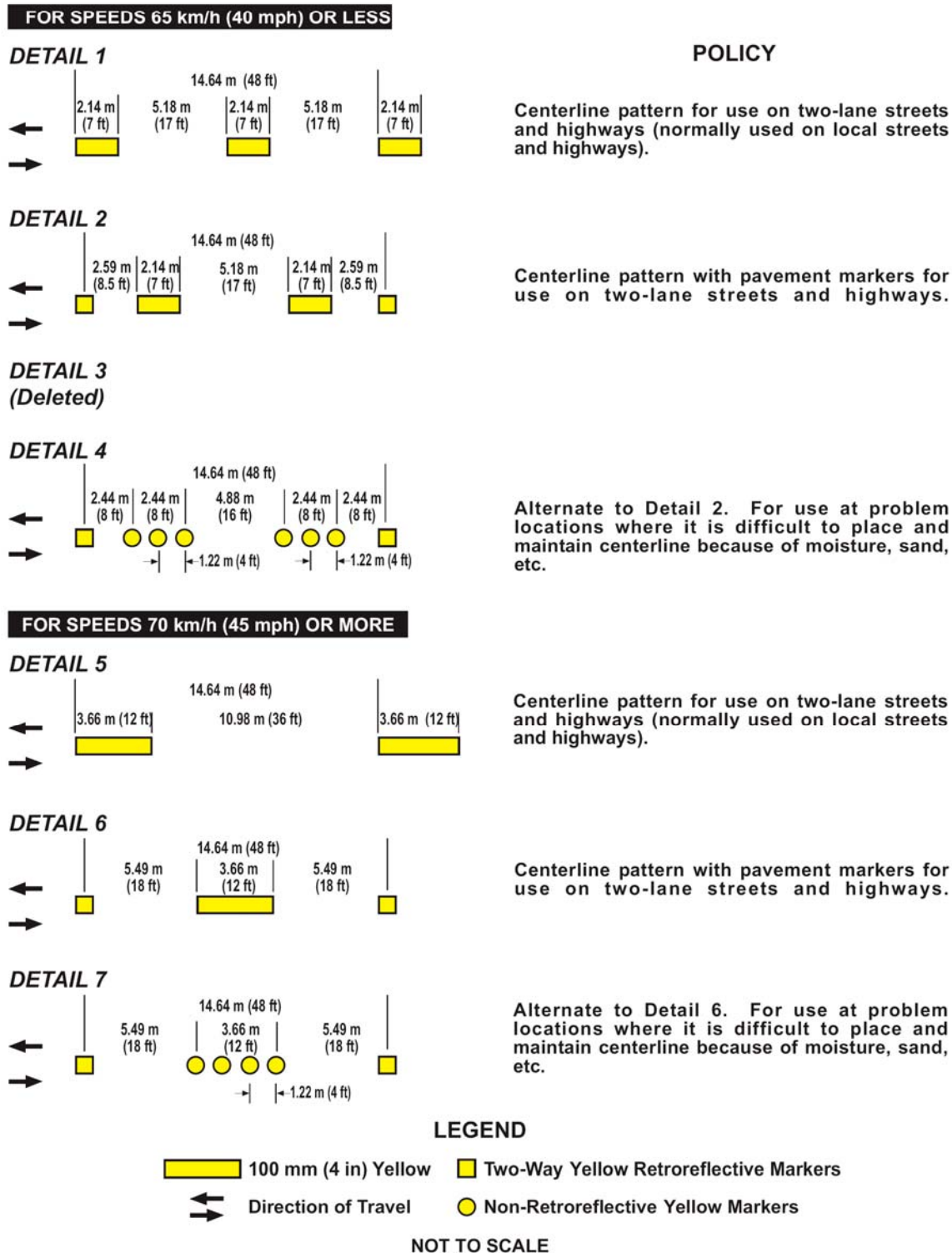
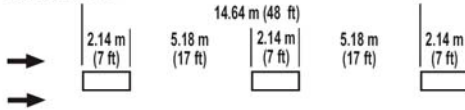
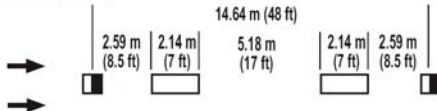
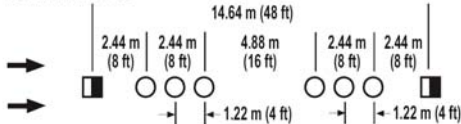
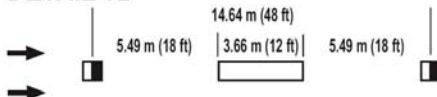
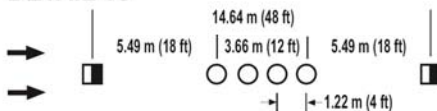
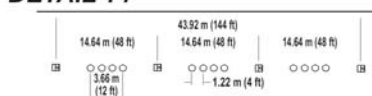
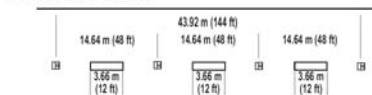
Figure 3A-101. Centerlines - 2 Lane Highways

Figure 3A-102. Lane Lines - Multilane Highways**FOR SPEEDS 65 km/h (40 mph) OR LESS****DETAIL 8****DETAIL 9****DETAIL 10****FOR SPEEDS 70 km/h (45 mph) OR MORE****DETAIL 11****DETAIL 12****DETAIL 13****DETAIL 14****DETAIL 14A****POLICY**

Lane Line pattern for use on multilane streets and highways (normally used on local streets and highways).

Lane Line pattern with pavement markers for use on multilane streets, highways and freeway ramps.

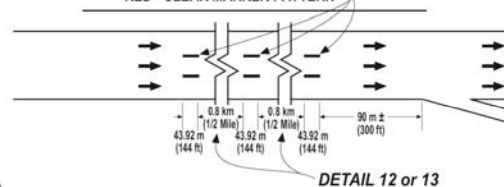
Lane Line pattern with pavement markers for use on multilane streets, highways and freeway ramps.

Lane Line pattern for use on multilane streets and highways (normally used on local streets and highways).

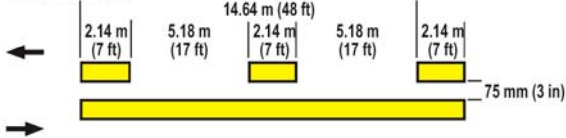
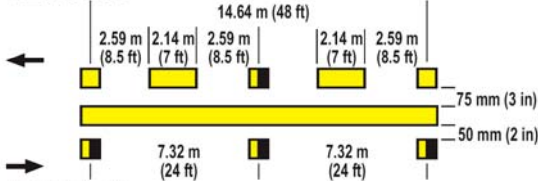
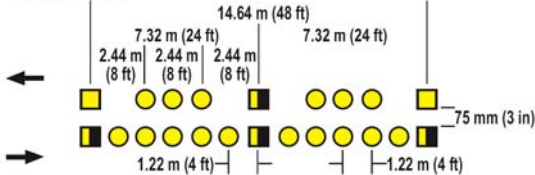
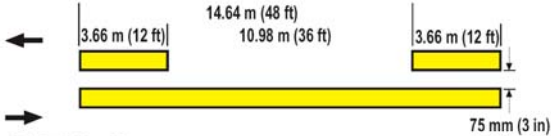
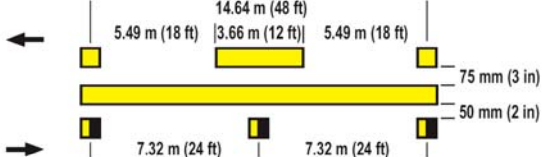
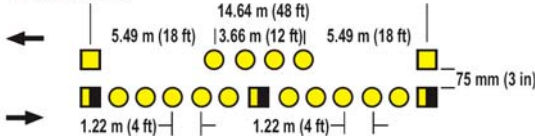
Lane Line pattern with pavement markers for use on multilane conventional streets and highways, State freeways, expressways, freeway ramps, freeway to freeway connectors and collector roads. See Detail 14A.

Lane Line pattern with pavement markers for use on State freeways, expressways, freeway ramps, freeway to freeway connectors and collector roads. See Detail 14.

Lane Line pattern with red-clear pavement markers shall be used on freeways approaching exit ramps. Detail 14 is used with Detail 13 and Detail 14A is used with Detail 12, in a pattern of four red-clear pavement markers, at intervals as shown.

**DETAIL 14 or 14A
RED - CLEAR MARKER PATTERN****LEGEND**

- 100 mm (4 in) White
 One-Way Clear Retroreflective Markers
 Non-Retroreflective White Markers
 Direction of Travel
 Red-Clear Retroreflective Markers
 NOT TO SCALE

Figure 3A-103. No Passing Zones - One Direction**FOR SPEEDS 65 km/h (40 mph) OR LESS****DETAIL 15****DETAIL 16****DETAIL 17****FOR SPEEDS 70 km/h (45 mph) OR MORE****DETAIL 18****DETAIL 19****DETAIL 20**

- NOTES:**
1. Pavement markers shown off the solid line in Details 16 and 19 may be placed on the line.
 2. A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) yellow lines on State highways and may be placed on streets and highways under local jurisdiction.

LEGEND

	100 mm (4 in) Yellow		Two-Way Yellow Retroreflective Markers		Non-Retroreflective Yellow Markers
	Direction of Travel		One-Way Yellow Retroreflective Markers	NOT TO SCALE	

POLICY

One direction no-passing pattern for use on two-lane streets and highways (normally used on local streets and highways). See Note 2.

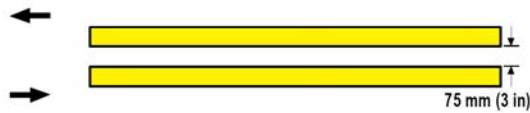
One direction no-passing pattern with pavement markers for use on two-lane streets and highways. See Notes 1 and 2.

Alternate to Detail 16. For use with Detail 4.

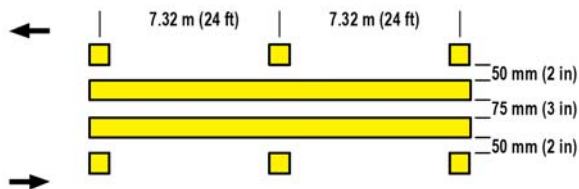
One direction no-passing pattern for use on two-lane streets and highways (normally used on local streets and highways). See Note 2.

One direction no-passing pattern with pavement markers for use on two-lane streets and highways. See Notes 1 and 2.

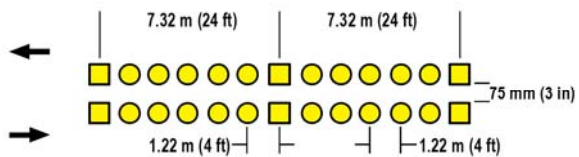
Alternate to Detail 19. For use with Detail 7.

Figure 3A-104. No Passing Zones - Two Direction**DETAIL 21****POLICY**

Two-direction no-passing pattern for use on two-lane streets and highways (normally used on local streets and highways). See Note 2.

DETAIL 22

Two-direction no-passing pattern with pavement markers for use on two-lane streets and highways. See Notes 1 and 2.

DETAIL 23

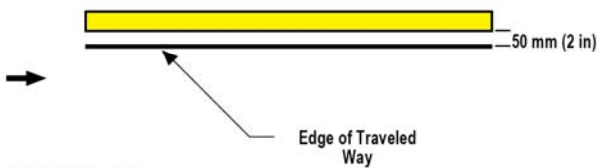
Alternate to Detail 22. For use with either Detail 4 or Detail 7.

- NOTES: 1. Pavement markers shown off the solid line in Detail 22 may be placed on the line.
2. A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) yellow lines on State highways and may be placed on streets and highways under local jurisdiction.

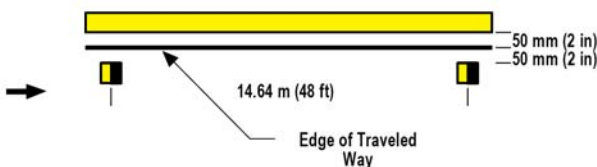
LEGEND

- | | |
|--|--|
|  100 mm (4 in) Yellow |  Two-Way Yellow Retroreflective Markers |
|  Direction of Travel |  Non-Retroreflective Yellow Markers |

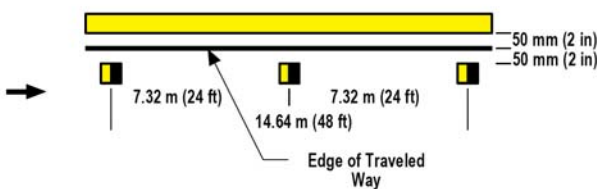
NOT TO SCALE

Figure 3A-105. Left Edge Lines for Divided Highways**DETAIL 24****POLICY**

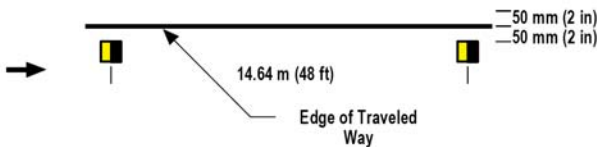
Left Edge Line pattern for use on streets and highways (normally used on local streets and highways).

DETAIL 25

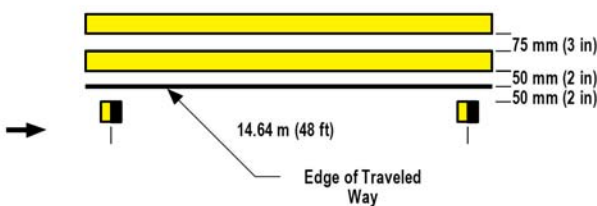
Left Edge Line for use on State highways.

DETAIL 25A

Left Edge Line for use on freeway ramps and connectors.

DETAIL 26

Alternate to Details 24 and 25 when there is adequate contrast between travelled way and shoulder.

DETAIL 27

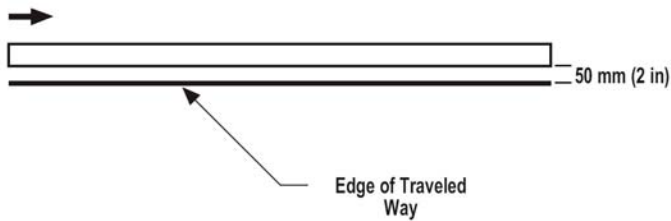
Alternate to Detail 25. A double solid yellow line may be used for more emphasis when motorists tend to use the shoulder for a through lane, or where encroachments onto the shoulder occasionally occur. See Note 1.

NOTE: 1. A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) yellow lines on State highways and may be placed on streets and highways under local jurisdiction.

LEGEND

Figure 3A-106. Right Edge Line and Right Edge Line Extension Through Intersections

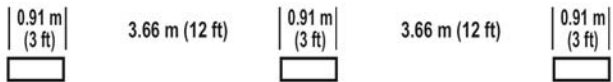
DETAIL 27B
Right Edge Line



POLICY

Right Edge Line pattern for use on all State highways may be used on local streets and highways. It is generally dropped at the beginning of the intersection flares on conventional highways. See also Detail 27C. On freeways, it may be flared in advance of the exit ramp as shown in Figure 3B-8 (CA).

DETAIL 27C
Right Edge Line Extension Through Intersections



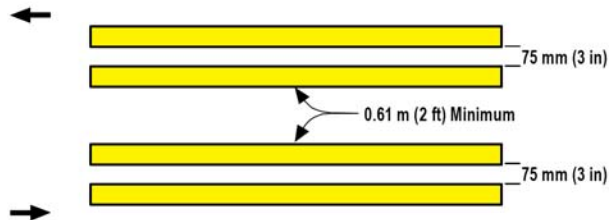
Right Edge Line Extension Through Intersections pattern for use to extend the right edgeline through an intersection where climatic conditions, such as areas of heavy fog, may require additional guidance.

NOTE: Raised markers should not supplement right edge line markings. See Section 3B.13.

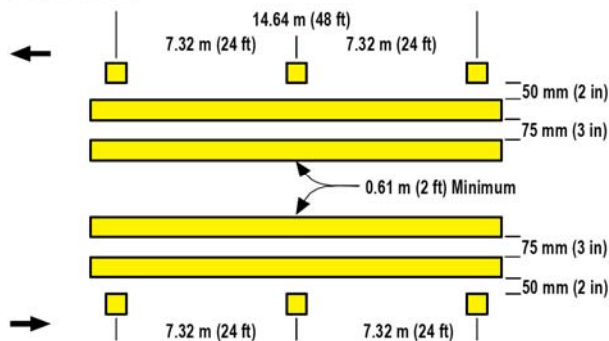
LEGEND



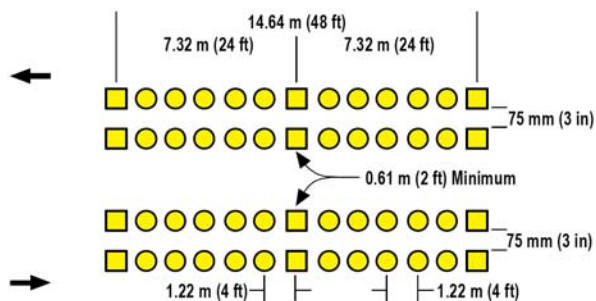
NOT TO SCALE

Figure 3A-107. Median Islands**DETAIL 28****POLICY**

Double Left Edge Line pattern for use on all-paved sections of streets and highways (normally used on local streets and highways). See Note 2.

DETAIL 29

Double Left Edge Line pattern with pavement markers for use on all-paved sections of streets and highways. See Notes 1 and 2.

DETAIL 30

Alternate to Detail 29. For use at problem locations where it is difficult to place and maintain lines because of moisture, sand, etc.

- NOTES: 1. Pavement markers shown off the solid line in Detail 29 may be placed on the line.
2. A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) yellow lines on State highways and may be placed on streets and highways under local jurisdiction.

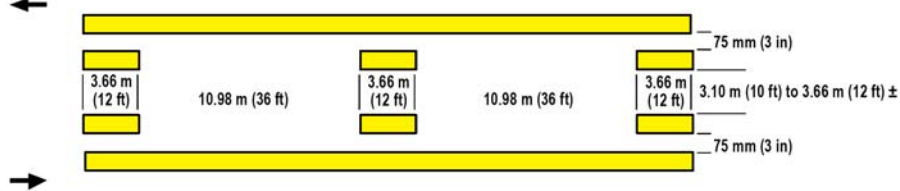
LEGEND

	100 mm (4 in) Yellow		Two-Way Yellow Retroreflective Markers
	Direction of Travel		Non-Retroreflective Yellow Markers

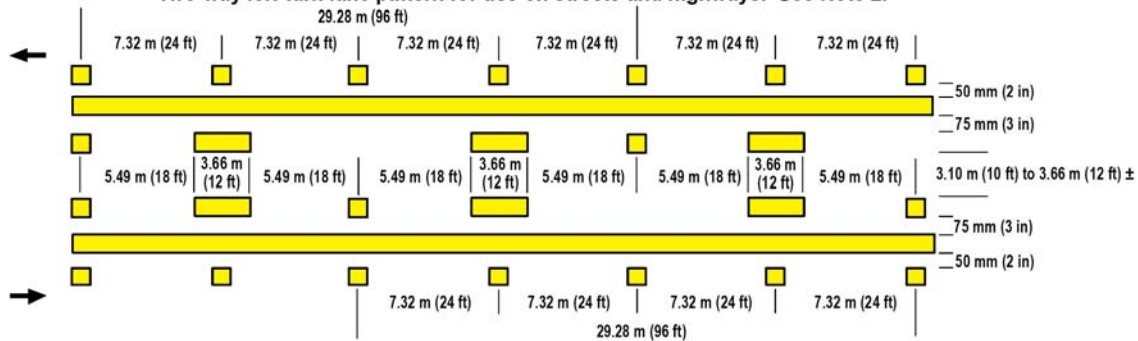
NOT TO SCALE

Figure 3A-108. Two-Way Left-Turn Lanes**DETAIL 31****POLICY**

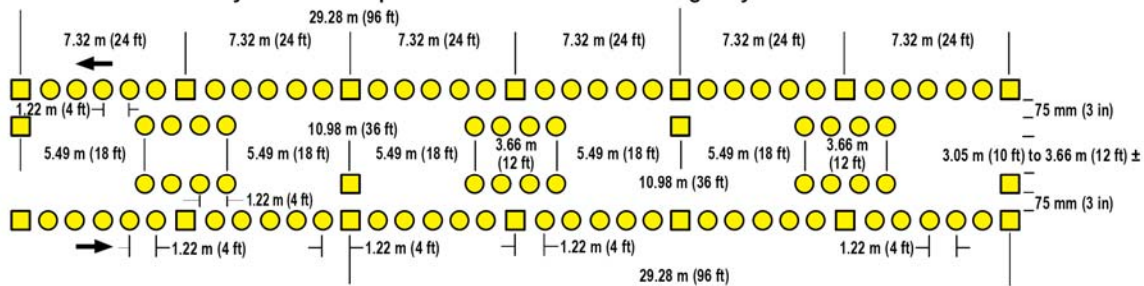
Two-way left-turn lane pattern for use on streets and highways (normally used on local streets and highways). See Note 2.

**DETAIL 32****POLICY**

Two-way left-turn lane pattern for use on streets and highways. See Note 2.

**DETAIL 33****POLICY**

Two-way left-turn lane pattern for use on streets and highways.

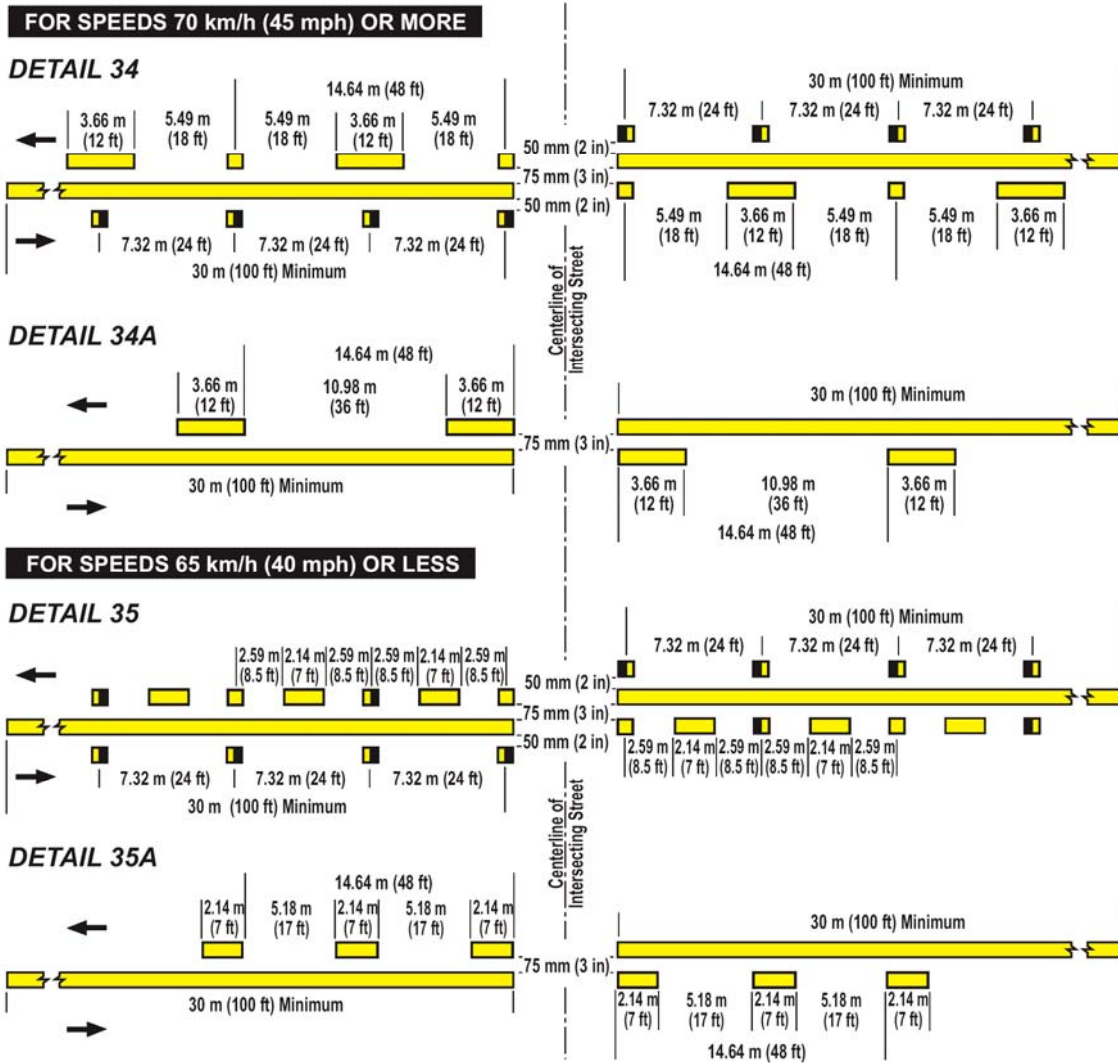


- NOTES: 1. Pavement markers shown off the solid line in Detail 32 may be placed on the line.
2. A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) yellow lines on State highways and may be placed on streets and highways under local jurisdiction.

LEGEND

- 100 mm (4 in) Yellow Two-Way Yellow Retroreflective Markers
 Direction of Travel Non-Retroreflective Yellow Markers

NOT TO SCALE

Figure 3A-109. Intersection Markings

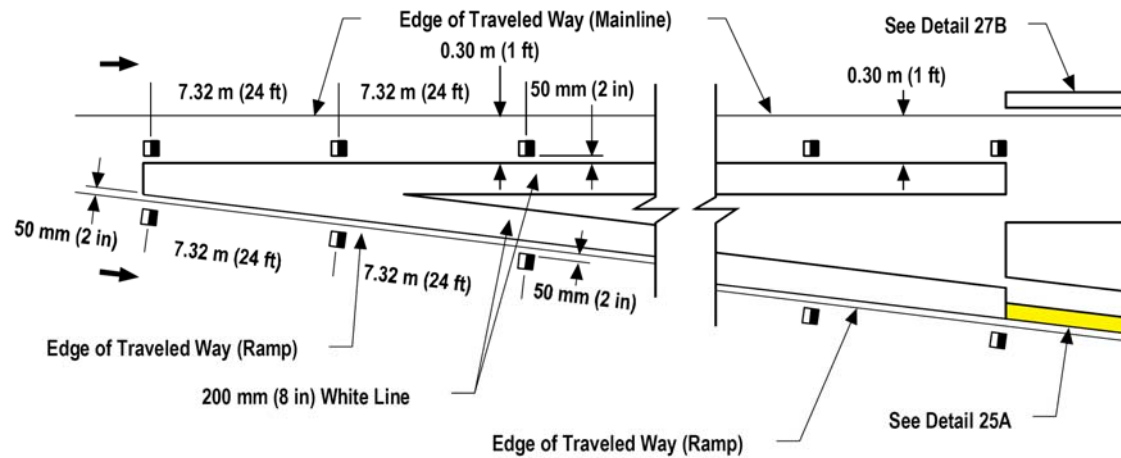
- NOTES:**
1. Raised Pavement Markers are optional on non-state highways.
 2. Raised Pavement Markers shown off the solid line may be placed on the line.
 3. A 75 mm (3 in) black line shall be placed between the 100 mm (4 in) yellow lines on State highways and may be placed on streets and highways under local jurisdiction.

LEGEND

	100 mm (4 in) Yellow		Two-Way Yellow Retroreflective Markers	NOT TO SCALE
	Direction of Travel		One-Way Yellow Retroreflective Markers	

**Figure 3A-110. Freeway Exit and Entrance Ramp Channelizing Lines
(Sheet 1 of 2)**

**DETAIL 36 - Exit Ramp Neutral Area (Gore) Channelizing Lines
(See Figure 3B-8 (CA), Sheet 2 of 2)**



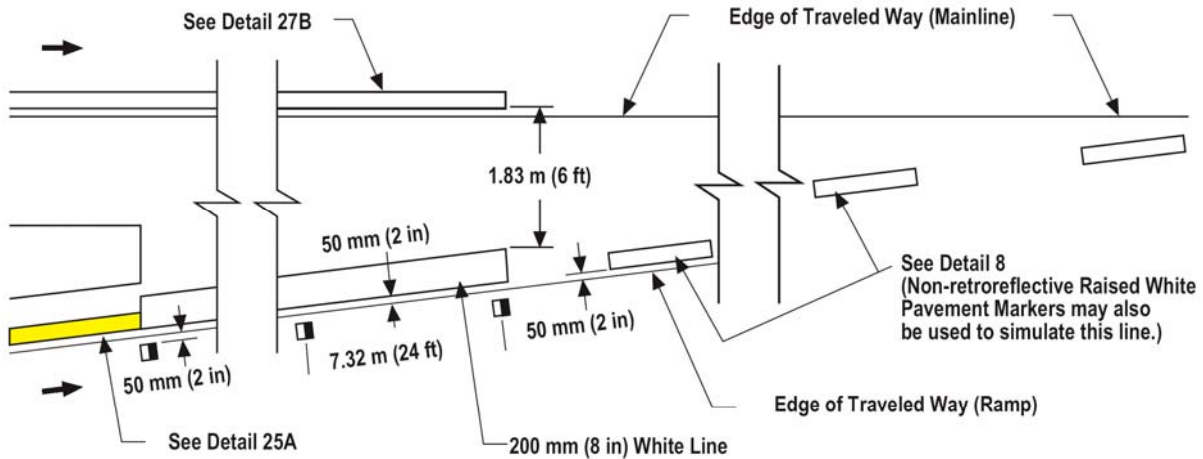
LEGEND

- 100 mm (4 in) White
- One-Way Clear Retroreflective Markers
- 100 mm (4 in) Yellow
- Direction of Travel

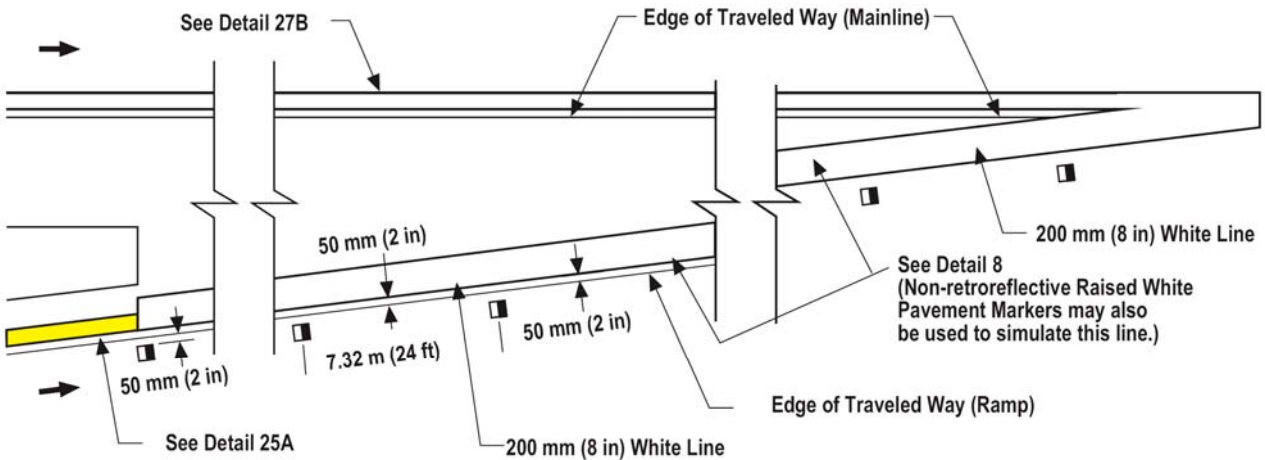
NOT TO SCALE

**Figure 3A-110. Freeway Exit and Entrance Ramp Channelizing Lines
(Sheet 2 of 2)**

DETAIL 36A - Entrance Ramp Neutral Area (Merge) Channelizing Lines
(See Figure 3B-9 (CA), Sheet 1 of 2)



DETAIL 36B - Entrance Ramp Neutral Area (Acceleration Lane) Channelizing Lines
(See Figure 3B-8 (CA), Sheet 3 of 3)



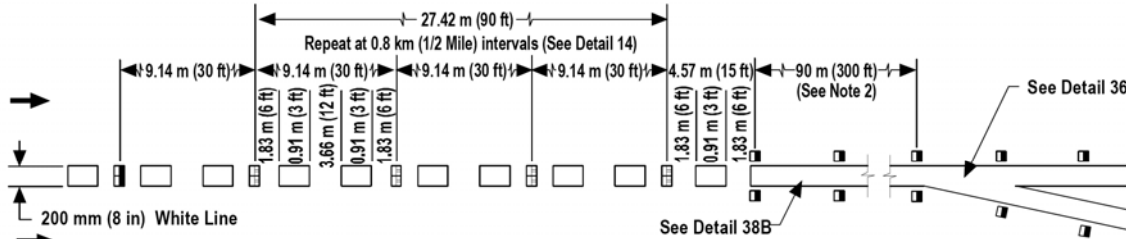
LEGEND

- 100 mm (4 in) White
- One-Way Clear Retroreflective Markers
- 100 mm (4 in) Yellow
- Direction of Travel

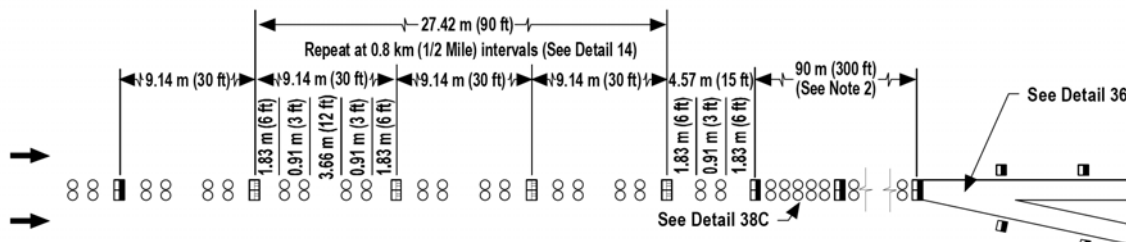
NOT TO SCALE

Figure 3A-111. Lane Drop Markings**DETAIL 37 - Lane Drop Markings at Exit Ramps**

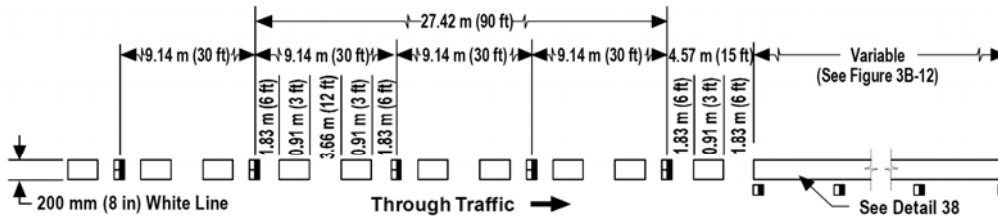
Marking pattern for use on mandatory lane drops at freeway exit ramps and freeway to freeway connectors.

**DETAIL 37A - Alternate to Detail 37**

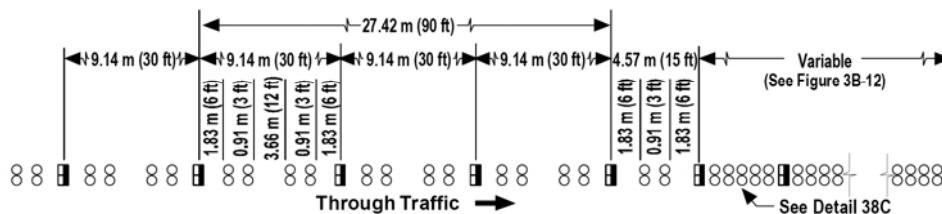
For use with Detail 10 and 13.

**DETAIL 37B - Lane Drop Markings at Conventional Highway Intersections**

Marking pattern for use on mandatory turn lanes at intersections. Pavement markers shown are optional on local streets and highways.

**DETAIL 37C - Alternate to Detail 37B**

For use with Detail 10 and 13.

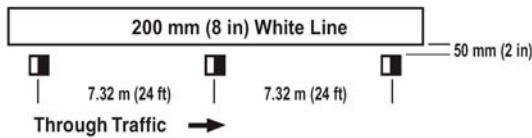


- NOTES: 1. Pavement markers shown off the solid line in Detail 37 may be placed on the line.
 2. The Solid Channelizing Line shown in Detail 37 and 37A may be omitted on short auxiliary lanes where weaving length is critical.

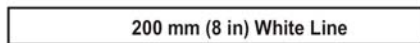
LEGEND

- 88 Non-Retroreflective White Markers One-Way Clear Retroreflective Markers
 → Direction of Travel Red-Clear Retroreflective Markers

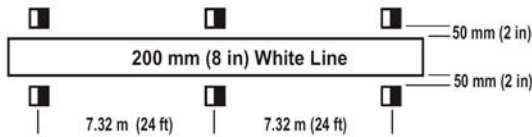
NOT TO SCALE

Figure 3A-112. Channelizing Line and Lane Line/Centerline Extensions**DETAIL 38 - Channelizing Line****POLICY**

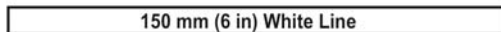
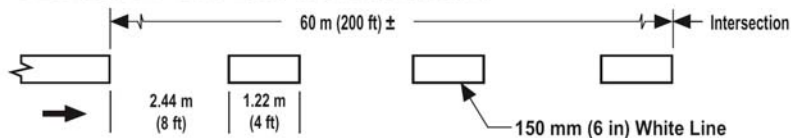
Typical channelizing line for use on Left-Turn or Right-Turn lanes on State highways. Pavement Markers when used should be placed on the through traffic side only.

DETAIL 38A - Channelizing Line

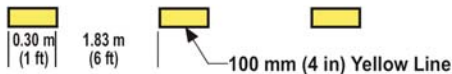
Typical channelizing line for use on Left-Turn or Right-Turn lanes on local streets and highways and freeway off-ramp terminals.

DETAIL 38B - Channelizing Line at Exit Ramps

Typical channelizing line for use on Exit Ramps. Pavement Markers as shown may also be placed on the line.

DETAIL 38C - Alternate to Detail 38 and 38B**DETAIL 39 - Bike Lane Line****DETAIL 39A - Bike Lane Intersection Line****DETAIL 40 - Lane Line Extension Through Intersections**

The Lane Line Extension Through Intersections line is used to extend the lane line through an intersection that might otherwise be confusing to the motorist.

DETAIL 40A - Alternate to Detail 40**DETAIL 41 - Centerline Extension Through Intersections**

The Centerline Extension Through Intersections line is used to extend the centerline through an intersection that might otherwise be confusing to the motorist.

DETAIL 41A - Alternate to Detail 41

NOT TO SCALE

